



Creative Solutions In Uintah Basin Oil and Gas Development

Presented to the Utah Energy Forum

March 15th, 2007

SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

About Us

- More than 250 cultural and natural resource scientists and planners company-wide
- Our Salt Lake City Office houses our President and 90 employees
- We specialize in environmental science and compliance; and cultural and natural resource analysis, planning, and management
- Our Vernal Office specializes in Energy Sector Environmental Solutions
- Employee-owned
- Engineering News-Record Top 200 Environmental Firm

Office Locations

With 19 locations, SWCA provides locally responsive environmental services across a wide geography



SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

Cultural Resources in the Uintah Basin

- Prehistoric and Historic Archaeological Sites
- Traditional Cultural Properties

Solutions

- National Historic Preservation Act Compliance
- Cultural Resource Overviews
- Cultural Resource Inventories
- Archaeological Testing and Data Recovery
- NRHP Documentation
- Historic Building Documentation
- HABS/HAER Documentation
- Ethnographic Studies
- Tribal Consultation
- Construction Training and Monitoring



SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

Paleontological Resources

Solutions

- Paleontological Surveys and Monitoring
- Paleontological Salvage



SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

Biological Resources in the Uintah Basin

- **Vegetation**
- **Special Status Plant Species**
- **Threatened, Endangered, and Candidate Wildlife Species**
- **Sensitive Wildlife Species**
- **Migratory Birds**



Solutions

- Biological Assessments
- Biological Evaluations
- Mitigation Plans
- Listed Species Surveys
- Endangered Species Surveys
- Habitat Conservation Plans
- Section 10 Permits
- Section 7 Consultations
- Mitigation Monitoring



SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

Clean Water Act Compliance

- 404 Permits
- Wetland Delineations
- Wetland Mitigation Plans
- Water Quality Inventory and Monitoring
- Wetland Banking Agreements
- Regional General Permits
- Special Area Management Plans (SAMPS)



NEPA and FERC Documentation

- Environmental Impact Statements
- Environmental Assessments
- FERC Resource Report 4 (Cultural Resources)

Environmental Monitoring

Solutions

- Successful compliance with permit conditions.
 - Find solutions before problems arise.
 - Field personnel with the confidence of contractors and regulators.
-
- FERC Monitoring Compliance
 - Training
 - Construction Monitoring for:
 - Hazardous Materials
 - Air Quality
 - Wetlands
 - Unanticipated Discovery Response
 - Wildlife
 - Noxious Weeds
 - Cultural Resources



Current Concerns and Creative Solutions

➤ Development Mode
Environmental Concerns

➤ APD Turnaround Time

➤ Concerns of Special Interests

➤ BLM Requests for Additional
Alternatives

✓ Area-Wide Resource Studies

✓ Submission of Environmental Assessments

✓ Creative Engagement

✓ Asses Directional Drilling Alternatives